

GORBACHEV, T.F.; PATRUSHEV, I.S.; KOSTYLEV, A.D., kand. tekhn.
nauk, otv. red.; OMBYSH-KUZNETSOV, S.O., red.

[Coal-mining machinery and equipment] Ugledobyvaiushchie
agregaty i komplekсы. Novosibirsk, Izd-vo Sibirskogo otd-
niia AN SSSR, 1964. 162.p. (MIRA 17:5)

GORBACHEV, T.F., otv. red.; TARASOVA, N.V., red.

[Development of mineral deposits] Razrabotka mestorozhdenii poleznykh iskopaemykh. Novosibirsk, Red.-izd. otdel Sibirskogo otd-niia AN SSSR, 1964. 227 p.

(MIRA 18:6)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. 2. Chlen-korrespondent AN SSSR (for Gorbachev).

GORBACHEV, T.F.; GRITSKO, G.I.; VLASENKO, B.V.

Manifestation of rheological properties in the massif during
advancing stoping operations in steeply pitching seams. Fiz.-
tekh. probl. razrab. pol. iskop. no. 1:13-19 '65. (MIRA 18:10)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR,
Novosibirsk.

GORBACHEV, T.F.

Fourth International Mining Congress. Fiz.-tekh. probl.
razrab. pol. iskop. no.5:179 '65. (MIRA 19:1)

GORBACHEV, V.F.

Reinkenhagen; a new oil and gas field in the German Democratic Republic. Geol. nefti i gaza 8 no.4:52-54 Ap '64.

(MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza.

GORBACHEV, V.F.; ZOLOTOV, A.N.; POVYSHEV, A.S.

Methodology of oil search and exploration in the Irkutsk amphitheater. Geol.nefti i gaza 9 no.2:24-27 F '65.

(MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza i trest Vostsibneftegeologiya.

GORBACHEV, V. I.

USSR/Engineering - Trucks, Welding

Aug 50

"Automatization and Mechanization of Assembly-Welding Operations in Manufacturing All-Metal Bodies for Automobiles," Engineers, N. A. Chuvakov, V. I. Gorbachev

"Avtogen Delo" No 8, pp 9-12

Describes welding equipment for mass production of all-metal cab of ZIS-150 truck. Subject processes developed in three directions: Construction of special automatic multiple-spot welding machines, mechanization of assembly stands and equipment, and development of portable tools for spot welding.

PA 167T52

AUTHOR: Gorbachev, V. I., Engineer 135-58-8-8/20

TITLE: Projection Welding of Ball-Bearing Separators (Rel'yefnaya svarka separatorov sharikopodshipnikov)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 8, pp 28 - 30 (USSR)

ABSTRACT: Detailed information is given on a new method and devices for welding ball-bearing separators developed by 1 GPZ together with 4 GPZ, the "Elektrik" Plant, VNIIESO and the Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering). The special welding device (fig.3,4) is used on the "MTIP" spot welding machine converted into a welding press. A special device for this process, controlling the quality of the welded joint by the current which passes through each welded spot, was developed at MEI. This simple device consists of an amplifier, a light signal device and a power supply unit. Light signals appear when the welding current amplitude deviates from the admissible range. The described installation has been used in the production of 50,000 bearings which are undergoing tests at 5 plants. The process is very stable and elimin-

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Projection Welding of Ball-Bearing Separators

135-58-8-8/20

ates metal spatter. Results have been satisfactory. There are 4 diagrams, 1 graph, 1 photo and 2 Soviet references.

ASSOCIATION: 1st GPZ

1. Ball bearing cages--Production 2. Welding--Applications

Card 2/2

GORBACHEV, V.I. (g.Gorlovka)

Making mirrors in the chemistry club. Khim. v shkole 11 no.2:
70-73 Mr-Apr '56. (MLRA 9:7)
(Mirrors)

GORBACHEV, Vasily Ivanovich; SAVITSKIY, Anatoliy Yefimovich;
TIMOFEYEV, Mariya Kharitonovna; KACHALKINA, Z.I., red. izd-
va; RYKOV, N.A., otv. red.; MAKSIMOVA, V.V., tekhn. red.

[Conveyor operator] Mashinist konveiera. Moskva, Gosgortekhnizdat,
1962. 99 p. (MIRA 15:12)

(Conveying machinery)

PACHENTSEV, Yu.A.; GORBACHEV, V.I.

Projection welding of ball bearing separators with an alternating current. Avtom. svar. 17 no.4:67-70 Ap '64 (MIRA 18:1)

1. Institut elektrosvarki imeni Ye.O.Patona AN UkrSSR for Pachentsev). 2. Pervyy gosudarstvennyy poshipnikovyy zavod (for Gorbachev).

GORBACHEV, V.I.; VARSHAVSKIY, A.G.

Reorganization of the A-537 semiautomatic welder for welding metal structures. Avtom.svar. 18 no.1:76-77 Ja '65.

(MIRA 18:3)

GORBACHEV, V. I. (Engineer) (1st GPZ)

"Contact relief welding of separators of ballbearings"

Report presented at the regular conference of the Moscow city administration
NTO Mashprom, April 1963.

(Reported in Avtomaticheskaya Svarka, No. 8, August 1963, pp 93-95, M. M. Popekhin)

JPRS24, 651 - 19 May 64

GORBACHEV, V.K.

Some clinical statistical data on mental morbidity of vascular
genesis. Trudy Vor. med. inst. 51:43-48 '63.

(MIRA 18:10)

1. Voronezhskiy oblastnoy psikhonevrologichesk'y dispanser.

- USSR / Diseases of Farm Animals. Toxicoses.

R

Abs Jour: Ref Zhur-Biol., No 8, 1958, 35850.

Author : ~~Gorbachev, V. M.~~

Inst : Timiryazev Agricultural Academy.

Title : Diagnosis of Food Poisoning.

Orig Pub: Izv. Timiryazevsk. s.-kh. akad., 1957, No 2
30-45.

Abstract: It was observed that histologic examination of coarse fodder enables us to discover admixture of poisonous plants. Generic and specific indications of conductive fascicles are demonstrated, as well as shapes and sizes of filaments, of epidermis cells and other tissues of various poisonous plant families. Admixture

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USSR / Diseases of Farm Animals. Toxicoses.

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Abs Jour: Ref Zhur-Biol., No 8, 1958, 35850.

Abstract: of poisonous plant fruits and seeds in grain fodder can be easily recognized by their form and their characteristic appendages. Plant fruits and seeds are divided into 10 species, in accordance with these indications. Measures for preventing food poisoning are discussed.

Card 2/2

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RADTSIG, V.A.; GORBACHEV, V.M.

Range of the expedient application of one-stage water clarifying
systems. Vod. i san. tekhn. no. 7:6-9 J1 '58. (MIRA 11:7)
(Water--Purification)

RADTSIG, V.A., dotsent, kand.tekhn.nauk; GORBACHEV, V.M., inzh.

Mud collecting capacity of contact clarifiers in the treatment of
highly turbid river waters. Izv. Ural.politekh.inst. no.85:28-38
'60.

(MIRA 14:8)

(Water--Purification)

GORBACHEV, V. M.
USSR/Physics - Positron absorption

FD-1358

Card 1/1 : Pub. 146-3/18

Author : Baskova, K. A., and Gorbachev, V. M.

Title : Comparative investigation of the absorption of monoenergetic positrons and electrons in copper and cadmium

Periodical : Zhur. eksp. i teor. fiz., 26, pp 270-274, Mar 1954

Abstract : The authors present the results of comparative measurements of the absorption of monoenergetic positrons and electrons of equal energies in copper and cadmium. They show that the observed difference in absorption of positrons and electrons of equal energy increases with increase of the ordering number of the absorber. It is confirmed that positrons are absorbed in heavy substances noticeably more weakly than electrons. Ten references, 8 Western and 2 USSR (K. A. Baskova and B. S. Dzhelepov, DAN SSSR, 77, 1001, 1951; I. P. Selinov, Atomnyye yadra i yadernyye prevrashcheniya (Atomic nuclei and nuclear conversions), GITTL, Moscow-Leningrad, 1951).

Institution : Leningrad State University

Submitted : April 16, 1953

AUTHOR
TITLE

GORBACHEV, V.M., ZAMYATNYN, Yu. S.,

89-8-3/26

The Intensity Determination of Very Short Pulses of Fast Neutrons
(Opredeleniye intensivnosti kratkovremennykh impulsov bystrykh neytronov.
Russian)

PERIODICAL

Atomnaya Energiya, 1957, Vol 3, Nr 8, pp 101 - 105 (U.S.S.R.)

ABSTRACT

With the so-called "contraction method", the neutron yield is measured by the γ -quanta, which form on the occasion of the capture of neutrons decelerated in paraffin.

On the Photocathode of a multiplier there is a crystal with ϕ of 35 mm, H = 20 mm, which is surrounded by a cadmium hood on its upper part. The entire head of the multiplier is surrounded by a paraffin cylinder (ϕ = 130 mm, H = 150 mm), which, in turn, is enclosed by a thin lead cylinder.

By this arrangement time measurements of 100 - 300 μ s become necessary instead of the pulse times of 0,1 - 1,0 μ s, because the average life of slow neutrons in paraffin amounts to only about 200 μ s.

The pulses of the photomultiplier are led to an amplifier ($< 3 \cdot 10^6$ Hz) and from here to the cathode of the cathode ray oscillograph, the deviation of which on the screen gives a spiral-shaped image. By the pulse from the multiplier the deviation is interrupted, and the black spots

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on the oscillogram then correspond to the number of neutrons. The sensitivity of the various crystals was measured and the following values were obtained:

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Stilbs 1,00, naphtaline 1,16, NaI 2,60, CsI 4,12

If several of the systems described are connected in parallel, a sensitivity of 0,05 - 0,1 neutron per cm^2 can be attained. (With 1 table, 4 illustrations, and 2 Slavic references).

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Not given

Library of Congress

Card 2/2

120-4-4/35

AUTHORS: Gorbachev, V.M. and Kazarinova, M.I.

TITLE: Detection of Disintegration Fragments and Charged Particles by Thin Scintillation Films. (Registratsiya oskolkov deleniya i tyazhelykh zaryazhennykh chastits tonkimi stsintilliruyushchimi plenkami)

PERIODICAL: Priory i Tekhnika Eksperimenta, 1957, No.4, pp. 20 - 24 (USSR).

ABSTRACT: The aim of the present work was to design a fast detector of disintegration fragments based on an application of thin scintillation films. The following scintillators were used: terphenyl anthracene, 2.5 diphenyloxazol in various concentrations in polystyrene. The obtained solution was transferred by means of a pipette on to a glass surface and was then dried at room temperature for a number of hours. After the drying process, the film was easily detachable from the glass. To accelerate the drying process, the glass can be warmed up to 50 - 60 °C. A layer of U^{235} (1 mg/cm²) placed in a beam of thermal neutrons was used as the source of disintegration fragments. The layer was placed in a vacuum chamber at a distance of 5 cm from the scintillation film. All the measurements were carried out using a photomultiplier collecting 100% of the Card1/2 photoelectrons. Pulses from the photomultiplier were fed into

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an amplifier, integral discriminator and then to a counting device.

Detectors based on thin scintillation films have a resolving time of the order of 3×10^{-9} sec. and can be used in fast coincidence schemes. It is found possible to detect disintegration fragments on a high alpha background. The efficiency of the detector for disintegration fragments and alpha particles is 100%. Their sensitivity to gamma rays and fast neutrons is low. Thin scintillation films with a deposited layer of

Li^6 , U^{235} can be used as fast detectors of thermal neutrons. The problem was suggested by Yu. S. Zamyatnin. There are 4 figures, 1 table and 8 references, 2 of which are Slavic.

SUBMITTED: March 7, 1957.

AVAILABLE: Library of Congress

Card 2/2

AUTHORS: Gorbachev, V. M., Poretskii, L. B. 89-2-18/35

TITLE: Inelastic Cross-Section of Some Light Elements for 14 MeV Neutrons (Secheniya neuprugogo vzaimodeystviya neytronov s energiyey 14 Mev s nekotorymi legkimi elementami).

PERIODICAL: Atomnaya Energiya, 1958. Nr 2, pp. 191-192 (USSR)

ABSTRACT: The following inelastic scattering cross sections were measured for 14 MeV neutrons:

Li ⁶	0,66 ± 0,05 barn
Li ⁷	0,52 ± 0,06 barn
Be ⁹	0,55 ± 0,04 barn
B	0,74 ± 0,07 barn
C	0,63 ± 0,06 barn

The authors express their thanks to Yu. S. Zamyatin for his interest in their work. Their are 1 table and 4 references, 2 of which are Slavic.

SUBMITTED: September 30, 1957

AVAILABLE: Library of Congress

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1. Lithium 6 fission-Measurement 2. Lithium 7 fission-Measurement
 3. Beryllium 9 fission-Measurement 4. Boron fission-Measurement
 5. Carbon fission-Measurement 6. Neutrons-Scattering

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S/120/60/000/01/019/051

E192/E382

9.4160

AUTHORS: Gorbachev, V.M., Usenko, L.D. and Uvarov, N.A.

TITLE: Measurement of the Transit Time of the Electrons in Photomultipliers

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, Nr 1,
pp 69 - 73 (USSR)

ABSTRACT: The transit time of the electrons in photomultipliers of several types was measured by the "electron-current control" method which was devised by the authors and the results were compared with the measurements obtained by the spark method (Ref 2). The current-control method permits application of a fixed light source and is based on the following principle. When the cathode of the multiplier is illuminated, a current is produced in the tube. However, if a sufficient negative voltage is applied to the diaphragm of the system the electrons can be "held" between the cathode and the diaphragm so that the tube produces no current. If a positive pulse is then applied to the diaphragm, the normal operating voltage between the electrodes of the system is restored

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and an output pulse is obtained. The time interval from the instant of the application of the control pulse to the diaphragm to the instant of the appearance of the output pulse permits the determination of the transit time t_d

of the electrons. The measurement circuit based on the above principle is shown in Figure 3. The light source is situated in the vicinity of the photo cathode. Normally, the diaphragm is at a negative potential of about 100 V with respect to the cathode. The thyatron (the second tube in Figure 3) is triggered by a pulse generator and produces a pulse which is applied to the diaphragm. Simultaneously, a pulse is applied directly to the plates of a double-beam oscilloscope. The pulse from the collector of the photomultiplier is amplified and is registered by the second beam of the oscillograph. The amplifier employed in the measurements had a rise time of 3×10^{-8} sec and an output amplitude of 60 V. The rise time of the pulse applied to the diaphragm of the tube under test was

Card2/5 $(5-10) \times 10^{-9}$ sec. The amplitude of the control pulse was 4

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variable. The measurement of the t_d by the spark method was carried out by the circuit shown in Figure 4. A spark gap discharging the capacitor C (see Figure 4) was used as the light source. The electrical pulse produced by the condenser discharge was used as the trigger pulse of the oscillograph and was also applied to the deflection plates of the oscillograph through a delay line. The light produced by the spark resulted in an output pulse at the collector of the multiplier and this was applied to the second pair of the deflection plates. The transit time t_d as a function of the supply voltage was investigated for the photomultipliers with various dynode systems.

The following photomultipliers were used:

- 1) FEU-1V with a circular dynode system;
- 2) FEU-12 with "shutter"-type dynode system;
- 3) FEU-19M with a linear dynode system;
- 4) FEU-33 with a linear dynode system and auxiliary electrodes.

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In each case the transit time was measured by both the above methods. The results obtained by those methods are in close agreement, as can be seen from Figure 7, which gives the transit time as a function of the supply voltage. The transit times of all the four photomultipliers are compared in this figure. The overall error of the measurements does not exceed $(4-5) \times 10^{-9}$ sec. It was found that the transit time as the function of the operating voltage could be expressed by:

$$t_d^{-1} = (a \sqrt{V} + b) 10^6 \text{ sec}^{-1} \quad (2)$$

where V is the operating voltage and a and b are the constant coefficients. The validity of this formula is corroborated by the straight line of Figure 8, where $1/t_d$ is plotted as a function of \sqrt{V} . The authors express their gratitude to Yu.S. Zamyatin for his constant interest in this work, Yu.A. Barashkov for participating in the

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Measurement of the Transit Time of the Electrons in Photomultipliers

initial stages of the investigation and V.N. Malyshkin
and V.A. Skachkov for their help in the measurements.

There are 8 figures, 1 table and 9 references, 2 of
which are English and 7 Soviet.

SUBMITTED: November 26, 1958

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24.6500,24.6510

77246
SOV/89-8-2-11/30

AUTHORS: Kazarinova, M. I., Zamyatnin, Yu. S., Gorbachev, V. M.

TITLE: 2.5 and 14.6 mev Neutron Cross Sections of Th^{230} ,
 Pu^{240} , Pu^{241} , and Am^{241} Fission. Letter to the Editor

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 2, pp 139-141 (USSR)

ABSTRACT: Following recent fission cross-section measurements by fast neutrons, various researchers tried to establish an empirical relation between the relative fission probability $f = \frac{\sigma_f}{\sigma_c}$ and parameter $\frac{Z^2}{A}$. Nevertheless, the functional relation between f and the mass number A (for a fixed atomic number Z) was investigated in some detail only for the case of uranium, and the relation between f and Z was not clear at all, except that f rises quite rapidly with increasing Z . To study closer this latter problem and to get a more precise $f(A)$ relationship, the authors exposed Th^{230} , Pu^{240} , Pu^{241} , and Am^{241} to

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2.5 and 14.6 mev Neutron Cross Sections of
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2.5 and 14.6 mev neutrons originating from deuterium and tritium targets bombarded by 150-200 kev deuterons. The registration of events took place by means of a fission chamber with electron collection. Isotope content of Th and Am was determined mass-spectrometrically, and that of Pu²³⁹ in a layer of Pu²⁴⁰ by "weighing" it in the flux of thermal neutrons. The content of Am²⁴¹ formed in a Pu²⁴¹ layer resulting from its β disintegration was determined from the known accumulation time. The amount of Th²³⁰, Pu²⁴⁰, Am²⁴¹ isotopes in layers under investigation was determined by counting α -particles emitted by those isotopes. The Pu²⁴⁰ content in the layer was also determined from the number of spontaneous fissions, and the amount of Pu²⁴¹ by counting α -particles from Am²⁴¹. The Pu²⁴¹ layer was also "weighed" in the thermal neutron flux, taking $1,025 \pm 10$ barn for the

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value of the Pu²⁴¹ thermal neutron fission cross section. For Pu²⁴⁰ and Pu²⁴¹ various methods used agreed within experimental errors. Table 1 contains the results obtained together with the half-lives used by the authors during calculations.

Table 1. The characteristics of layers of isotopes studied.

Isotope	Effective weight, μg	Half-life, years	Isotopic composition
Th ²³⁰ Pu ²⁴⁰	(1870±40) (345±15)	8·10 ⁴ [2] 6,6·10 ³ [1]; $T_{1/2, \text{exp.}} =$ 1,2·10 ⁴ [2]	(35±1)% Th ²³⁰ ; (65±1)% Th ²³² 15% Pu ²⁴⁰ ; 85% Pu ²⁴¹
Pu ²⁴¹ Am ²⁴¹	(50,0±1,6) (89±2)	13,2 [3] 458±0,5 [3]	12% Am ²⁴¹ ; 88% Pu ²⁴¹ 100% Am ²⁴¹

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The 14.6 mev neutron cross section was determined by absolute methods. Neutron flux was obtained counting α -particles from $\text{T}(\text{d}, \text{n})\text{He}^4$ reaction, while the background of scattered neutrons was determined performing measurements at different places between the chamber and the sources. The 2.5 mev measurements could not be made completely exact, because of the small counting rate. Relative measurements utilized twin fission chambers which contained at the same time a material of known fission cross section for neutrons of given energy. Cross section of Th^{230} was taken relative to that of Th^{232} , and those of Pu^{240} , Pu^{241} , and Am^{241} relative to the U^{238} fission cross section. For control purposes Am^{241} was compared to U^{235} . The 2.5 mev cross sections were also compared to those at 14.6 mev by utilizing the relative fission cross sections of materials used in the neutron beam monitors:

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0.13 and 0.34 barn for Th²³⁵ and 0.58 and 1.1 barn for U²³⁸ detectors at the respective energies of 2.5 and 14.6 mev. Cross section values are from papers of Hughes and Schwartz (see reference at end of Abstract). All 2.5 mev values agreed on the limit of errors, and results are given in Table 2.

Table 2. 2.5 and 14.6 mev neutron induced fission cross sections σ_f of isotopes, barn.

Isotopes	2.5 mev		14.6 mev		
	Data from present experiments	Data by other authors	Data from present experiments	Data by other authors	σ/σ_1
Th ²³⁰	0.41±0.08	—	0.72±0.15	—	0.00
Pu ²⁴⁰	1.6±0.3	—	2.4±0.3	—	2.55
Pu ²⁴¹	1.2±0.2	1.5±0.15 [A]	2.05±0.1	2.6±0.2* [A]	2.15
Am ²⁴¹	1.95±0.2	1.35 [A]	2.95±0.15	2.35±0.15 [B]	2.85

Card 5/11 * Fission cross section due to neutrons of 14 mev energy.
** Fission cross sections on the second plateau, computed using Eq. (4).

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In Table 2, Reference [A] is: V. G. Nesterov, G. N. Smirenkin, Zh. eksperim. i teor. fiz., 35, 522 (1958); and Reference [B] is: A. N. Protopopov, Yu. A. Selitskiy, Atomnaya energiya, 6, Nr 1, 67 (1959). The authors paid special attention to possible mistakes in the case of Am^{241} , where the results disagreed with results of other authors, but they did not find any appreciable error. Evaluation of Results. The 2.5 mev neutron results verify the decrease of the fission cross section and the ratio f with the increase of A (for fixed Z). The explanation of this is connected to the decrease of neutron binding energy, and to the related rise in neutron evaporation probability. From this standpoint the practically negligible influence of pairing of the fissionable isotopes on $f(A)$ seems slightly strange, since it affects the binding energy E_B . The authors found also that f is not a single-valued function of Z^2/A since, as seen on Fig. A, each element has a particular f -curve.

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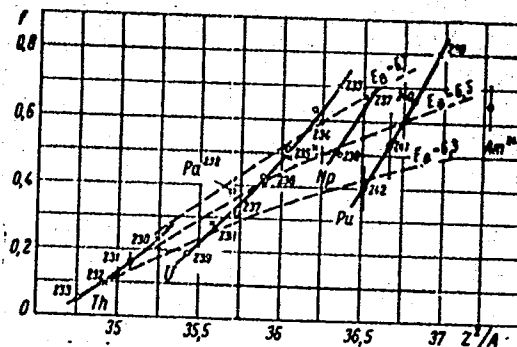
2.5 and 14.6 mev Neutron Cross Sections of
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Fig. "A". Relative probability of nuclear fission f versus the parameter

Z^2/A . o, neutron-induced fission; x, photofission (points o and x taken from: Yu. S. Zamyatnin, The Physics of Nuclear Fission, Supplement Nr 1 to the periodical Atomnaya energiya; M. Atomizdat, 1957, p 27, corrected by taking into



account newly published fission cross-section data); \vdots are data from the present investigation. Dashed line shows approximate $f(Z^2/A)$ relationships for various values of the binding energy.

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Trying to fit all the curves together using Z^n/A , at $n \neq 2$, dependence, it became clear to the authors that fitting curves of different groups of elements would require different exponents of n . To fit Th, Pa, and U, n should be 1.7; to fit U, Np, and Pu, n should be 1.2; to fit Am^{242} with the Pu curve, $n = 0.8$. The authors note that the weaker dependence of f from Z is apparently connected to the fact that, in addition to the Z^2/A parameter, f is determined also by the probability of neutron evaporation, which again depends on the binding energy of neutrons. If one takes into account that for a given Z^2/A and the same pairing, an increase in Z is connected to a decrease of binding energy (see Table 3) and, consequently, with an increase of evaporation probability, it becomes understandable why one observes reduced relative fission probability of isotopes of elements with larger Z .

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Table 3. Neutron binding energy in nuclei versus
Z for fixed Z^2/A , in mev.

Z^2/A							
35.25		35.5		36.2		36.5	
—	—	Th ²³⁸	7.0	—	—	U ²³⁸	7.1
Th ²³⁰	6.7	Pu ²³⁸	6.6	U ²³⁴	6.7	Np ²³⁷	6.7
Pu ²³⁴	6.3	—	—	Np ²³⁹	6.3	Pu ²⁴¹	6.2
—	—	U ²³⁴	6.0	—	—	—	—
U ²³⁰	5.8	—	—	—	—	—	—

It follows that by observing nuclei which have equal values of E_B one can exclude the effect of neutron evaporation and obtain an $f(Z^2/A)$ depending on the fission process only (see Fig. A). The 14.6 mev

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2.5 and 14.6 mev Neutron Cross Sections of
Th²³⁰, Pu²⁴⁰, Pu²⁴¹, and Am²⁴¹ Fission.
Letter to the Editor

77246

SOV/89-8-2-11/30

fission cross sections may be compared to the expected
fission cross-section values on the second plateau
using

$$\sigma_{f1} = \sigma_{f0} \left[1 + \frac{(1 - f_0) f_1}{f_0} \right] \quad (1)$$

Computed values σ_f are tabulated in Table 2. Allowing
during such a comparison the possibility of occurrence
of a new channel leading to fission of the nucleus
reaction (n, 2nf) whose energy threshold lies slightly
below 14 mev, and allowing the possibility of a slant
of the plateau due to a difference in the fission Γ_f
and neutron Γ_n width increase with energy, the agree-
ment may be considered as good. A larger discrepancy
in case of Th²³⁰ can be explained by lower accuracy
of its fission cross-section determination. B. V.
Kurchatov, M. I. Pevzner, G. N. Yakovlev, E. P. Dergunov,

Card 10/11

2.5 and 14.6 mev Neutron Cross Sections of
 Th^{230} , Pu^{240} , Pu^{241} , and Am^{241} Fission.
 Letter to the Editor

77246

SOV/89-8-2-11/30

and S. K. Sokolova supplied the isotopes and prepared the layers; I. A. Tishchenko and G. M. Kukavadze performed the mass-spectrometric analysis; Yu. A. Vasil'yev and E. I. Sirotin performed measurements on the accelerating tube; and M. S. Shvetsov, Yu. A. Barashkov, and E. D. Beregovento helped take measurements. There is 1 figure; 3 tables, and 8 references, 3 Soviet, 1 U.K., 4 U.S. The U.K. and U.S. references are: J. Huizenga, Phys. Rev., 109, 484 (1958); D. Hughes, R. Schwartz, Neutron Cross Sections, New York, BNL (1958); D. Hall, T. Markin, J. Inorg. and Nucl. Chem., 4, 137 (1957); R. Leachman, Report Nr 2467 presented by U.S.A. at the Second United Nations International Conference for the Peaceful Uses of Atomic Energy (Geneva 1958); M. Studier, J. Huizenega, Phys. Rev., 96, 545 (1954).

SUBMITTED:
 Card 11/11

August 8, 1959

9,4150(1138)

27705
S/120/61/000/003/017/041
E192/E382

AUTHORS: Gorbachev, V.M., Uvarov, N.A. and Usenko, L.D.

TITLE: Raster Time Base Without Dead Time

PERIODICAL: Priory i tekhnika eksperimenta, 1961, No. 3,
pp. 93 - 95

TEXT: Physical processes of comparatively long duration can be observed by means of a cathode-ray tube provided with a scanning (or raster) time-base system which deflects the ray both vertically and horizontally. In general, the horizontal or line deflection system is based on a symmetrical triangular waveform generator. This system suffers from the disadvantage that the end of the forward line and the start of the return line tend to overlap, so a portion of the line is lost. On the other hand, if the return line is suppressed, the system possesses a dead time during which the signal cannot be observed. A time-base system free from the above disadvantages was therefore devised. This is based on a double-beam cathode-ray tube (Ref. 1 - the authors - Authors Certificate No.127324, 4.1.1960). Continuous observation of the signal in the system
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E192/E382

Raster Time Base Without Dead Time

is ensured by applying the investigated signal successively to one or the other beam of the tube. The investigated signal is applied to both the deflection plates simultaneously but one of the beams is suppressed while the other is operative. A detailed description of the time-base system is given. The driver for the line time-base is in the form of a symmetrical multivibrator operating at a frequency of 1 Mc/s. This is followed by forming or shaping stages, which produce sawtooth pulses having a good linearity over their operating range. These pulses are amplified to about 400 V and are then applied to the horizontal deflection plates of a two-beam cathode-ray tube (type 18J047 (18L047)). During their flyback, each of the rays is suppressed while in the forward direction they form a linear scanning system where the length of a line is equal to the oscillation period of the multivibrator. The frame-scanning deflection is produced by a triggered linear voltage oscillator and the flyback suppression is effected by employing pulses from the driver multivibrator. The time difference between the end of one line and the start of the

X

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S/120/61/000/003/C17/041
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Raster Time Base Without Dead Time

next is determined by the rise time of the blanking pulses and can be very short. The overlap time, which is due to finite rise time of the pulses, can be reduced by increasing the steepness of the pulse fronts. It is possible for this purpose, to shape the pulses by means of transmission lines or to employ secondary emission pentodes. The authors improved the shape of the pulses by diode-limiting of the multivibrator pulses so that the overlap time between the rays was 6×10^{-8} sec. In the experimental system used by the authors, the time base operated with three fixed lengths: 100, 500 and 1 000 μ s, corresponding to 3, 10 and 20 μ s line duration, respectively. The oscilloscope based on the above raster time base and the tube, type 18Lo47, had a writing speed of up to 0.015 μ s/mm, the number of lines being 100 and the length of line 100 mm. The maximum duration of the investigated process was 2 000 μ s. An oscillogram illustrating the recording of the pulses of a scintillation counter is shown in Fig. 2. The authors express their gratitude to Yu.S. Zamyatnin for his interest in this work.

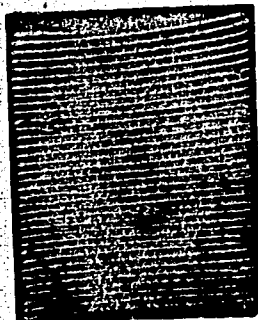
Card 3/4

Raster Time Base Without Dead Time ²⁷⁷⁰⁵ S/120/61/000/003/017/041
E192/E382

There are 2 figures and 2 Soviet references.

SUBMITTED: August 4, 1960

Fig. 2:



Card 4/4

S/120/62/000/003/017
E192/E382

9.3280

AUTHORS:

Predein, B.A., Gorbachev, V.M., Sem'in, G.N.,
Uvarov, N.A., Filimonchev, M.I. and Shevtsov, V.A.

TITLE:

A wideband pulse amplifier

PERIODICAL:

Pribery i tekhnika eksperimenta, no. 3, 1962,
84 - 86

TEXT:

The amplifier consists of three stages of distributed amplification, each consisting of 4 tubes. The output and middle stages are based on secondary emission tubes, type 6B1P (6V1P). It is possible (by employing these tubes) to obtain a symmetrical output and high output voltages. However, since the tube 6V1P is nonlinear at small signals, the input stage is based on tubes, type 6Zh22P (6Zh22P), whose input capacitance is almost identical with that of 6V1P, so that identical loads could be employed in all grid circuits. The distributed loads of the amplifier stages are in the form of lumped delay lines based on m-derived filters, the wave impedance of the anode, dynode and grid lines being 150Ω. The bandwidth of the amplifier is about 150 Mc/s per stage, which

Card 1/2

A wideband pulse amplifier

S/120/62/000/003/019/048
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corresponds to a rise time of about 3×10^{-9} sec. The output of the amplifier is applied to the plates of an oscilloscope by means of a cable, type PK-50 (RK-50), about 1 m long. The amplification of the system at the anode output is about 240 and at the dynode it is about 160, the symmetrical output giving a gain of 400. The maximum amplifier output at the anode is 140 V and at the dynode-30 V. The longest pulses applied should not exceed 3 μ s in order to avoid the fatigue effects in the secondary emission tubes. The authors express their gratitude to I.M. Cherednichenko for discussing the results and to A.V. Filatov and B.F. Krest'yaninov for preparing the experimental models of the device. There are 3 figures.

SUBMITTED: December 2, 1961

Card 2/2

37796

S/120/62/000/002/021/047
E192/E382

9.1400

AUTHORS: Gorbachev, V.M., Uvarov, N.A. and Usenko, L.D.

TITLE: Distortion of nanosecond pulses during their transmission by cables

PERIODICAL: Pribery i tekhnika eksperimenta, no. 2, 1962,
92 - 94

TEXT: The problem was investigated experimentally and analytically. Experimentally, the study of the transient response of the cables was carried out directly by taking the oscillograms of the pulses at the output of a section of a cable. A rectangular pulse with an amplitude of 100 V, a duration of 50×10^{-9} sec and a rise time of 1×10^{-9} sec was produced by a generator, type ГКН-4А (ГКН-4А). This was applied to a line 100 m long and the output pulses were recorded on an oscillograph, type ОС-6 (OS-6) having a bandwidth of 3 000 Mc/s. Analytically, the response to a unit step of a coaxial cable terminated with a matched load can be expressed as:

Card 1/3

Distortion of

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$$U(\ell, t) = 1 - F(M\ell/2\sqrt{\tau}) \approx 1 - F(x) \quad (2)$$

where ℓ is the length of the cable and

$$F(x) = \frac{2}{\sqrt{\pi}} \left(x - \frac{x^3}{113} + \frac{x^5}{215} - \dots \right), \quad (3)$$

where $\tau = t - \ell/v$, $v = 1/\sqrt{L_o C_o}$.

The attenuation coefficient in Eq. (2) is expressed as:

$$M = \frac{1}{4\pi} \frac{C_o}{L_o} \left[\frac{k_1 \sqrt{\mu_1 \epsilon_1}}{r_1} + \frac{k_2 \sqrt{\mu_2 \epsilon_2}}{r_2} \right] \quad (4)$$

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E192/E382

Distortion of

where L_0 and C_0 are the inductance and capacitance of the cable per unit length,
 μ is the permeability,
 r is the resistance of the cable per unit length, and
 r is the radius of the conductor.

The index "1" in Eq. (4) refers to the parameters of the internal conductor, while the index "2" indicates the parameters of the external conductor. The twist factor k_1 in Eq. (4) takes into account the change in the resistance of the internal conductor due to its stranded form; the coefficient k_2 is the braiding factor, which takes into account the increase in the resistance of the external conductor due to its braiding. The response of a 100-m cable calculated from Eq. (2) is illustrated in Fig. 3. Curves II and III correspond to two different types of cable, while the circles represent the experimental points; it is seen that the theory is in good agreement with experiment. There are 5 figures and 1 table.

Card 3/03

S/120/63/000/001/022/072
E140/E135

AUTHORS: Gorbachev, V.M., Korolev, V.N., and Uvarov, N.A.

TITLE: High-speed oscillograph using travelling-wave tubes

PERIODICAL: Priory i tekhnika eksperimenta, no.1, 1963, 98-101

TEXT: A high-speed oscillograph using 13J10102M (13L0102M) travelling-wave cathode-ray tubes is intended for photographic registration of two non-repeating high-speed processes. The vertical sensitivity is 2 V/mm, the timebase duration for deflection across the 100 mm screen varies between 0.1 and 3 μ s; the delay in triggering the timebase is not more than 30×10^{-9} sec. There are 4 figures.

SUBMITTED: February 20, 1962

Card 1/1

GORBACHEV, V.M.; KOROLEV, V.N.; UVAROV, N.A.

High-speed oscillograph on traveling wave tubes. Prib. i tekhn.
eksp. 8 no.1:98-101 Ja-F '63. (MIRA 16:5)
(Oscillograph)

GORBACHEV, V.M.; UVAROV, N.A.

Integral detector for determining the intensity of short
neutron pulses. Prib. i tekhn. eksp. 10 no.5:77-82 S-O '65.

(MIRA 19:1)

1. Submitted July 21, 1964.

GORBACHEV, V.M.; MASLOV, G.N.; UVAROV, N.A.

Wide-range intensitometer. Prib. i tekhn.eksp. 10 no.5:
82-85 S-0 '65. (MIRA 19:1)

1. Submitted July 22, 1964.

L 28037-66 EWA(h)/EWT(m)

ACC NR: AP5027010

SOURCE CODE: UR/0120/65/000/005/0077/0082

AUTHOR: Gorbachev, V. M.; Uvarov, N. A.

ORG: None

TITLE: Integral detector¹⁹ for the determination of the intensity of short neutron pulses

SOURCE: Pribery i tekhnika eksperimenta, no. 5, 1965, 77-82

TOPIC TAGS: neutron detection, scintillation counter, nuclear physics apparatus

ABSTRACT: The use of integral scintillation counters with a delayed recording of neutrons is discussed. The counters were placed in paraffin wax to slow down the fast neutrons and then to capture them by paraffin hydrogen. The capture gamma rays were recorded by a scintillation counter. After reviewing various methods and devices, the use of integral method of counting (instead of a discrete one) was recommended. The FEU-36 integral detector diagrammatically shown in Fig. 1(Card 2/2) was described. Its counter range reached 10^5 counts and the neutron sensitivity was about 0.05 neutron per sq cm. The detector signals are recorded by a three-beam oscillographic tube. The two-beam tube of an 18L047 type could also be used. A detailed connection diagram of such

Card 1/2

UDC: 539.1.074.3

ACC NR: AP5027010

a recording arrangement was presented and briefly explained. The samples of recorded oscillograms were shown in a photo. The dimensions of various scintillation crystals and the voltage ratios were given in a table. The voltage characteristics could be improved in certain cases by applying a back-feed arrangement to the integral detector. A schematic diagram of such an arrangement was presented and various voltage characteristics were illustrated. Orig. art. has: 5 figures and 1 table.

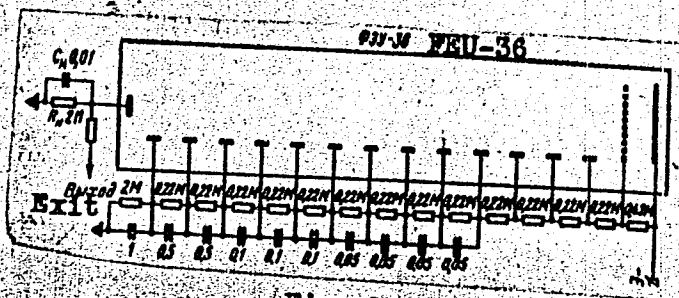


Fig. 1

SUB CODE: 18 / SUBM DATE: 21 July 64 / ORIG REF: 007 / OTH REF: 001

Card 2/2 CC

L 29775-66 ENT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6015072

(A)

SOURCE CODE: UR/0363/66/002/005/0886/0889

AUTHOR: Mikhaylov, V. A.; Popov, A. N.; Gorbachev, V. M.; Torgova, E. I. 49
B

ORG: Institute of Inorganic Chemistry, SO, Academy of Sciences, SSSR (Institut neorganicheskoy khimii SO Akademii nauk SSSR)

TITLE: Oxidation of PCl_3 microimpurity to POCl_3 in a methyltrichlorosilane medium

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 5, 1966, 886-889

TOPIC TAGS: phosphorus chloride, silane, chemical oxidation

ABSTRACT: The oxidation of PCl_3 in methyltrichlorosilane CH_3SiCl_3 (MTCS) was studied in connection with the necessity of thoroughly removing phosphorus impurity from MTCS when the latter is used for preparing semiconducting silicon carbide. The possibility of oxidizing microquantities of trivalent phosphorus was checked on PCl_3 present in amounts of $1.3-2.6 \times 10^{-4}$ wt % in MTCS, the P^{32} radioisotope being used as the label. The oxidation of such small amounts of trivalent phosphorus was found to be inhibited by trace impurities. A fast and complete oxidation of PCl_3 to POCl_3 by atmospheric oxygen takes place when PCl_3 is present in amounts greater than 0.1

Card 1/2

UDC: 546.18 + 546.287

L 29775-66

ACC NR: AP6015072

vol % in purified MTCS. However, the introduction of $>6 \times 10^{-4}$ wt % FeCl_3 also stops the oxidation of macroquantities of PCl_3 . A complete conversion of macro- and microquantities of PCl_3 into POCl_3 in a medium of technical MTCS or MTCS contaminated with iron compounds is achieved by using ozonized air or air containing 20-30 vol % Cl_2 or NO_2 . Orig. art. has: 2 figures and 2 tables.

SUB CODE: 07~~10~~ SUBM DATE: 06Aug65/ ORIG REF: 005/ OTH REF: 006

Card 2/2 *fv*

GOHBACHEV, V.N., inzhener; DUNDUKOV, M.D., inzhener.

Mechanization of operations in lining of canal slopes. Mekh.stroi. 10 no.
6:16-21 Jo '53. (MLRA 6:6)

(Canals--Inclined planes)

GORBACHEV, V. N.

ANDON'YEV, V.L.; BAUM, V.A.; BAUMGARTEN, N.K.; BERLIN, V.D.; BIRYUKOV, I.K.;
 BIRYUKOV, S.M.; BLOKHIN, S.I.; BOBOVOY, G.A.; BULEV, M.Z.; BURAKOV,
 N.A.; VERTSAYZER, B.A.; VOVK, G.M.; VORMAN, B.A.; VOSHCHININ, A.P.;
 GALAKTIONOV, V.D., kand. tekhn. nauk; GENKIN, Ye.M.; GIL'DENBLAT,
 Ya.D., kand. tekhn. nauk; GINZBURG, M.M.; GLEBOV, P.S.; GODES, B.G.;
 GORBACHEV, V.N.; GRZHB, B.V.; GRMKULOV, L.F., kand. s.-kh. nauk;
 GHOZHENSKAYA, I.Ya.; DANILOV, A.G.; DMITRIYEV, I.G.; DMITRIYENKO,
 Ya.D.; DOBREKHOTOV, D.D.; DUBININ, I.G.; DUNDUKOV, M.D.; ZHOLIK,
 A.P.; ZHUKOVICH, D.K.; ZIMARIN, Ye.V.; ZIMASKOV, S.V.; ZUBRIK, K.M.;
 KARANOV, I.P.; KNYAZEV, S.N.; KOLMGAYEV, M.M.; KOMAROVSKIY, V.T.;
 KOSENKO, V.P.; KORNISTOV, D.V.; KOSTROV, I.N.; KOTLYARSKIY, D.M.;
 KRIVSKIY, M.N.; KUZNETSOV, A.Ya.; LAGAR'KOV, N.I.; LIGALOV, V.G.;
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 K.I.; MENDEL'VICH, I.R.; MIKHAYLOV, A.V., kand. tekhn. nauk;
 MUSIYVA, R.N.; NATANSON, A.V.; NIKITIN, M.V.; OVES, I.S.;
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 SINYAVSKAYA, V.T.; SITAROVA, M.N.; SOSNOVIKOV, K.S.; STAVITSKIY,
 Ye.A.; STOLYAROV, B.P. [deceased]; SUDZILOVSKIY, A.O.; SYRISOVA,
 Ye.D., kand. tekhn. nauk; FILIPPSKIY, V.P.; KHALTURIN, A.D.;
 TSISHLEVSKIY, P.M.; CHERKASOV, M.I.; CHERNYSHEV, A.A.; CHUSOVITIN,
 N.A.; SHESTOPAL, A.O.; SHKHTER, P.A.; SHISHKO, G.A.; SHCHERBINA,
 I.N.; ENGEL', F.F.; YAKOBSON, A.G.; YAKUBOV, P.A., ARKHANGEL'SKIY,
 (Continued on next card)

ANDON'YEV, V.L.... (continued) Card 2.

Ye.A., retsenzent, red.; AKHUTIN, A.N., retsenzent, red.; BALASHOV, Yu.S., retsenzent, red.; BARABANOV, V.A., retsenzent, red.; BATUNER, P.D., retsenzent, red.; BORODIN, P.V., kand. tekhn. nauk, retsenzent, red.; VALUTSKIY, I.I., kand. tekhn. nauk, retsenzent, red.; GRIGOR'YEV, V.M., kand. tekhn. nauk, retsenzent, red.; GUBIN, M.F., retsenzent, red.; GUDAYEV, I.N., retsenzent, red.; YERMOLOV, A.I., kand. tekhn. nauk, retsenzent, red.; KARAULOV, B.F., retsenzent, red.; KRITSKIY, S.N., doktor tekhn. nauk, retsenzent, red.; LIKIN, V.V., retsenzent, red.; LUKIN, V.V., retsenzent, red.; LUSKIN, Z.D., retsenzent, red.; MATRIROSOV, A.Kh., retsenzent, red.; MENDELEYEV, D.M., retsenzent, red.; MENKEL', M.F., doktor tekhn. nauk, retsenzent, red.; OBHNEZKOV, S.S., retsenzent, red.; PETRASHIN', P.N., retsenzent, red.; POLYAKOV, I.M., retsenzent, red.; RUMYANTSEV, A.M., retsenzent, red.; RYABCHIKOV, Ye.I., retsenzent, red.; STASHENKOV, N.G., retsenzent, red.; TAKANAYEV, P.F., retsenzent, red.; TARANOVSKIY, S.V., prof., doktor tekhn. nauk, retsenzent, red.; TIZDEL', R.R., retsenzent, red.; FEDOROV, Ye.M., retsenzent, red.; SHEVYAKOV, M.N., retsenzent, red.; SHMAKOV, M.I., retsenzent, red.; ZHUK, S.Ya. [deceased], akademik, glavnyy red.; RUSSO, G.A., kand. tekhn. nauk, red.; FILIMONOV, N.A., red.; VOLKOV, L.N., red.; GRISHIN, M.M., red.; ZHURIN, V.D., prof., doktor tekhn. nauk, red.; KOSTROV, I.N., red.; LIKHACHEV, V.P., red.; MEDVEDEV, V.M., kand. tekhn. nauk, red.; MIKHAYLOV, A.V., kand. tekhn. nauk, red.; PETROV, G.D., red.; RAZIN, N.V., red.; SOBOLEV, V.P., red.; FRINGER, B.P., red.; FREYGOFER,

(Continued on next card)

ANDON'YEV, V.L.... (continued) Card 3.

Ye.F., red.; TSYPLAKOV, V.D. [deceased], red.; KORABLINOV, P.M., tekhn. red.; GENKIN, Ye.M., tekhn. red.; KACHENOVSKIY, N.V., tekhn. red.

[Volga-Don; technical account of the construction of the V.I. Lenin Volga-Don Navigation Canal, the TSinlyansk Hydroelectric Center, and irrigation systems] Volgo-Don; tekhnicheskii otchet o stroitel'stve Volgo-Donskogo sudokhodnogo kanala imeni V.I. Lenina, TSinlianskogo gidrouzla i orositel'nykh sooruzhenii, 1949-1952; v piati tomakh. Moskva, Gos. energ. izd-vo. Vol.1. [General structural descriptions] Obshchee opisanie sooruzhenii. Glav. red. S.IA. Zhuk. Red. toma M.M. Grishin. 1957. 319 p. Vol.2. [Organization of construction. Specialized operations in hydraulic engineering] Organizatsiia stroitel'stva. Spetsial'nye gidrotekhnicheskie raboty.

(Continued on next card)

ANDON'YEV, V.L.... (continued) Card 4.

Glav. red. S.IA. Zhuk. Red. toma I.N. Kostrov. 1958. 319 p.

(MIRA 11:9)

1. Russia (1923- U.S.S.R.) Ministerstvo elektrostantsii. Byuro
tekhnicheskogo otcheta o stroitel'stve Volgo-Dona. 2. Chlen-kor-
respondent Akademii nauk SSSR (for Akhutin). 3. Deystvitel'nyy
chlen Akademii stroitel'stva i arkhitektury SSSR (for Grishin,
Razin).

(Volga Don Canal--Hydraulic engineering)

Gorbachev, V.N.

3(6)

PHASE I BOOK EXCERPTION

SOV/2065

Moscow. Institut Inzhenerov geodesii, aerofotos "yemli i kartografi".
Trudy, v. 32 (Transactions of the Moscow Institute of Geodesic
Aerial Survey and Cartographic Engineers, No. 32) Moscow,
Geodesistat, 1958. 130 p. 1,000 copies printed.

Ed. of Publishing House: A. Shumakov. Tech. Ed.: V. V. Romanov;
Editorial Board: A. I. Kuznetsov (No. 34), V. I. Artyukhin,
(No. 35), S. V. Gerasimov, M. Ya. Babir, M. M. Volkov,
B. I. Roditskiy, N. D. Solov'yev, B. V. Pefilov, and P. F. Shokin.

PURPOSE: This collection of articles is intended for geodesists,
photogrammetrists, and cartographers.

COVERAGE: This issue of the Institute's Transactions is composed of
articles on geodesic surveying, photogrammetry, cartography, and
geodesy. Surveying and geodesy are discussed in articles on
building line stations, earthwork computations, precise trigono-
metric leveling, latitude determination, solution of trigonometric
equations, and the geodesic interference coprocessor. Articles on
photogrammetry include the submergence photo rectification, spatial
triangulation, and photo interpretation. Articles on cartography
include the Trans-Caucasus map, the map of the Republic of Georgia,
2) maps of the Trans-Caucasus region, the map of the Republic of
Georgian SSR, the map of the Republic of Armenia, and 3) the
Karelian Republic. References accompany individual articles.

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AVAILABLE: Library of Congress		

ML/475
7-28-59

Card 4/6

GORBACHYEV, V. N., insh.

Activities of technical inspection units. Energi. no. 5:
212-215 '58. (MIRA 12:5)

1. Zamestitel' glavnogo inzhenera, nachal'nik tekhnicheskoy inspektsii Kuybyshevskiy gidrostroya.
(Volga Hydroelectric Power Plant--Quality control)

GORBACHEV, V.N., arkhitekt

I.I. Demidov's former house, present site of the Moscow Institute for Engineers in Geodesy, Aerial Photography, and Cartography, as an architectural monument. Trudy NIIGAIAK no. 32:113-123 '58.
(MIRA 12:7)

1. Nauchno-issledovatel'skiy sektor Moskovskogo instituta inzhenerov geodesii, aerofotos"yemki i kartografii.
(Moscow—Buildings)

ALEKSEYEV, G.P.; ANDON'YEV, V.S.; ARNGOL'D, A.V.; BASKIN, S.M.;
 BASHMAKOV, N.A.; BEREZIN, V.D.; BERMAN, V.A.; BIYANOV, T.F.;
 GORBACHEV, V.N.; GRECHKO, I.A.; GRINBUKH, G.S.; GROMOV, M.F.;
 GUSEV, A.I.; DEMENT'YEV, N.S.; DMITRIYEV, V.P.; DUL'KIN, V.Ya.;
 ZVANSKIY, M.I.; ZENKEVICH, D.K.; IVANOV, B.V.; INYAKIN, A.Ya.;
 ISAYENKO, P.I.; KIPRIYANOV, I.A.; KITASHOV, I.S.; KOZHEVNIKOV,
 N.N.; KORMYAGIN, B.V.; KROKHIN, S.A.; KUDOYAROV, L.I.;
 KUDRYAVTSEV, G.N.; LARIN, S.G.; LEBEDEV, V.P.; LEVCHENKOV,
 P.N.; LEMZIKOV, A.K.; LIPGART, B.K.; LOPAREV, A.T.; MALYGIN,
 G.F.; MILOVIDOVA, S.A.; MIRONOV, P.I.; MIKHAYLOV, B.V., kand.
 tekhn. nauk; MUSTAFIN, Kh.Sh., kand. tekhn. nauk; NAZIMOV, A.D.;
 NEFEDOV, D.Ye.; NIKIFOROV, I.V.; NIKULIN, I.A.; OKOROCHKOV, V.P.;
 PAVLENKO, I.M.; PODROBINNIK, G.M.; POLYAKOV, G.Ya.; PUTILIN, V.S.;
 RUDNIK, A.G.; RUMYANTSEV, Yu.S.; SAZONOV, N.N.; SAZONOV, N.F.;
 SAULIDI, I.P.; SDOBNIKOV, D.V.; SEMENOV, N.A.; SKRIPCHINSKIY, I.I.;
 SOKOLOV, N.F.; STEPANOV, P.P.; TARAKANOV, V.S.; TREGUBOV, A.I.;
 TRIGER, N.L.; TROITSKIY, A.D.; FOKIN, F.F.; TSAREV, B.F.; TSETSULIN,
 N.A.; CHUBOV, V.Ye., kand. tekhn. nauk; ENGEL', F.F.; YUROVSKIY,
 Ya.G.; YAKUBOVSKIY, B.Ya., prof.; YASTREBOV, M.F.; KAMZIN, I.V., prof.,
 glav. red.; MALYSHEV, N.A., zam. glav. red.; MEL'NIKOV, A.M., zam.
 glav. red.; RAZIN, N.V., zam. glav. red. i red. toma; VARPAKHOVICH,
 A.F., red.; PETROV, G.D., red.; SARKISOV, M.A., prof.; red.;
 SARUKHANOV, G.L., red.; SEVAST'YANOV, V.I., red.; SMIRNOV, K.I.,
 red.; GOTMAN, T.P., red.; BUL'DYAYEV, N.A., tekhn. red.

(Continued on next card)

ALEKSEYEV, G.P.---(continued). Card 2.

[Volga Hydroelectric Power Station; a technical report on the design and construction of the Volga Hydroelectric Power Station (Lenin), 1950-1958] Volzhskaya gidroelektrostantsiya; tekhnicheskii otchet o proektirovanii i stroitel'stve Volzhskoi GES imeni V.I.Lenina, 1950-1958 gg. V dvukh tomakh. Moskva, Gosenergoizdat. Vol.2. [Organization and execution of construction and assembly work] Organizatsiia i proizvodstvo stroitel'no-montazhnykh rabot. Red. toma: N.V.Razin, A.V.Arngol'd, N.L.Triger. 1962. 591 p. (MIRA 16:2)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury SSSR (for Razin).

(Volga Hydroelectric Power Station (Lenin)---Design and construction)

GORBACHEV, V. P.

"Prolonged Drainage as a Method of Concentrating Antiseptic Substances and Bodies During the Treatment of Deep Wounds in Animals." Cand Vet Sci, Omsk State Veterinary Inst. Min Higher Education, Omsk, 1954. (KL, No 10, Mar 55)

SO: Sum. No. 670, 29 Sep 55—Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

KIRILLOV, M.M., prof.; QORBACHEV, V.P., assistant; BERKOVICH, V.I., vetvrach

Early partial and total castration of bulls and rams. Veterinariia
35 no.11:43-44 N '58. (MIRA 11:11)

1. Omskiy veterinarnyy institut.
(Castration)

GORBACHEV, V.P., inzh.; TALALAY, S.Ya.

Using industrial methods installing heat insulation. Mont. i
spets. rab. v. stroi. 22 no.12:22-24 D '60. (MIRA 13:11)

1. Treast Stroytermoizolyatsiya.
(Insulation (Heat))

SMIRNOV, Gennadiy Dmitriyevich; GORBACHEV, Viktor Petrovich;
STERLIGOV, V.L., red.; KRASAVINA, A.M., tekhn. red.

[Radar systems with active response] Radiolokatsionnye sistemy s
aktivnym otvetom. Moskva, Voenizdat, 1962. 113 p.

(MIRA 15:5)

(Radar)

VERKHOVSKIY, I.M.; GORBACHEV, V.S.; SMIRNYAKOV, V.V.

Use of hydrocyclones for the purification of drilling fluids in
shaft sinking operations. Nauch. trudy MGI no. 32:113-120
'60. (MIRA 14:2)

(Separators (Machines)) (Drilling fluids)

GORBACHEV, V.S.

New machines for the shoe industry. Kozh. obuv. prom. 5 no.7:14
Jl '63. (MIRA 16:8)

(Shoe machinery)

GORBACHEV, V.S., gorny insh.

Prospects for jigging coal without preliminary classification.
Ugol' 39 no.8:35-39 Ag '64. (MIRA 17:10)

AUTHOR: Gorbachev, V.V. SOV/26-58-1-27/36

TITLE: The Discovery of a New Glacier in the North Urals (Otkrytiye novogo lednika na Severnom Urale)

PERIODICAL: Priroda, 1958, Nr 1, p 115 (USSR)

ABSTRACT: In summer 1956, a hitherto unknown glacier was discovered in the Northern Urals on the southeast slopes of the Tel'pos-Iz mountain range, 1 degree south of the glaciers of the Sablinskiy range; thought to be the southernmost glaciers of the Urals. It takes in an area of approximately 0.18 square km and goes down to an altitude of 1,050 m. It is about 800 m long and has an upper width of 500 and a lower width of about 150 m. The Tel'pos-Yu River emerges from a lake that has formed at the bottom of the glacier. There is 1 photo.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov)

GORBACHEV, V.V.

Modern glacier on the Tel'pos-Iz Mountain. Bul. MOIP. Otd.
geol. 34 no.6:123-127 '59. (MIRA 14:3)
(Tel'pos-Iz Mountain--Glaciers)

GORBACHEV, V.V.

PETUNIN, F.A.; PLOSKAYA, A.G.; GORBACHEV, V.V.

Krasnodar Krai Scientific Research Veterinarno-Experimental Station

"Experiment of treating franciellosis of cattle (*Francaiolia*
colchica Jak., 1927) with hemosporidin (LP₂).

SO: Vet. 28 (5) 1951, p. 39 (same Ref. in ORG. Biblio)

GORBACHEV, V. V.

Dissertation: "Botanical Principles of the Diagnosis of the Poisoning of Animals by Toxic Plants." Dr Biol Sci, Moscow Agricultural Academy imeni K. A. Timiryazev, Moscow, 1953. (Referativnyy Zhurnal--Khimiya, No 11, Moscow, Jun 54)

30: SUM 318, 23 Dec 1954

ARIYEVICH, Eleazar Moiseyevich; GORBACHEV, Vladimir Vasil'yevich;
CHEREMISOV, K.M., red.

[Designing and operating baths] Proektirovanie i eksplu-
atatsiia ban', Moskva, Stroizdat, 1965. 141 p.
(MIRA 18:12)

GORBACHEV, V.V.

Influence of some vitamins on the lipid metabolism in atherosclerosis.
Zdrav.Belor. 5 no.12:22-25 D '59. (MIRA 13:4)

1. Iz kafedry gosspital'noy terapii (sav. - prof. G.Kh. Dovgyallo)
Minskogo meditsinskogo instituta (glavnyy vrach I klinicheskoy bol-
nitsy - A.I. Shuba).
(LIPID METABOLISM) (ARTERIOSCLEROSIS) (VITAMINS)

GORBACHEV, V.V.

Treatment of atherosclerosis. Zdrav. Belor. 6 no.8:14-18 Ag '60.

(MIRA 13:9)

1. Iz kafedry gosital'noy terapii (zaveduyushchiy - professor G.Kh. Dovgyallo) Minskogo meditsinskogo instituta.

(ARTERIOSCLEROSIS)

GORBACHEV, V. V., Cand Med Sci -- "Comparative evaluation of
the effect of certain medicinal remedies ^{upon variation in} ~~the change of~~
the contents of cholesterol, lecithin, ^{and} protein, and lipo-
protein fractions in the blood serum of ^{g h g} arteriosclerotic ^{SIS} ~~the~~
patients." Vil'nyus, 1961. (Min of Higher and Sec Spec
Ed USSR. Vil'nyus State U im V. Kapsukas) (KL, 8-61, 260)

- 451 -

GORBACHEV, V.V.

Ascorbic acid and choline chloride treatment of arteriosclerosis.
Vrach. delo no.10:149 0 '61. (MIRA 14:12)

1. Kafedra gosptal'noy terapii (zav. - prof. Kh.G.Dovgyallo)
Minskogo meditsinskogo instituta.
(ARTERIOSCLEROSIS) (CHOLINE CHLORIDE)
(ASCORBIC ACID)

GORBACHEV, V.V.

Use of vitamin B₁₂ and folic acid in atherosclerosis. Zdrav.
Bel. 8 no.6:12-13 Ja'62. (MIRA 16:8)

1. Iz kafedry gosptal'noy terapii (zav. - prof. G. Kh.
Dovgyallo) Minskogo meditsinskogo instituta.
(ARTERIOSCLEROSIS) (FOLIC ACID)
(CYANOCOBALAMINE)

DOVGYALLO, G.Kh., prof.; GORBACHEV, V.V., kand. med. nauk

Treatment of atherosclerosis. Terap. arkh. 34 no.10:50-55
0'62 (MIRA 17:4)

1. Iz kafedry gosptal'noy terapii (zav. - prof. G.Kh.Dovgyallo)
Minskogo meditsinskogo instituta.

DOVGYALLO, G.Kh., prof.; GORBACHEV, V.V., kand. med. nauk

Clinical course of influenza in Minsk during the 1961-1962
epidemic. Zdrav. Bel. 9 no.3:18-20 Mr'63 (MIRA 16:12)

1. Iz kafedry gosptal'noy terapii Minskogo meditsinskogo in-
stituta (zav. - prof. G. Kh. Dovgyallo).

L 34893-65 EWT(m)/T/EWP(t)/EWP(b)/EWA(c) Feb DIAAP/IJP(c) JD

ACCESSION NR: AP5005269

S/0181/65/007/002/0367/0371

AUTHOR: Vintaykin, Ye. Z.; Gorbachev, V. V.; Gruzin, P. L.

TITLE: Investigation of thermal vibrations of the copper lattice atoms by the neutron spectrometry method

SOURCE: Fizika tverdogo tela, v. 7, no. 2, 1965, 367-371.

TOPIC TAGS: copper, lattice vibration, neutron spectrometry, neutron scattering, inelastic scattering

ABSTRACT: In order to reconcile the discrepancy between the dispersion relations obtained for copper in different crystallographic directions, by the x-ray and by the neutron-spectrometry methods, the authors have developed apparatus and measured the dispersion relations using inelastic scattering of neutrons. The apparatus consists of a monochromator unit, located behind a boroparaffin and lead shield near a horizontal reactor channel, and a two-axis spectrometer. the monochromator crystal was a lead slab 10 x 50 x 180 mm, cut from a single crystal such that the plane of the slab was parallel to the crystallographic (111) plane. The monochromator was tuned to a wavelength 1.44 Å. The crystal analyzer was similar

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ACCESSION NR: AP5005269

to the crystal monochromator. The double-axis spectrometer consisted of a position spectrometer used for neutron diffraction analysis (UNSA), described elsewhere (P. D. Abesadze et al, PTE, no. 2, 43, 1964) and a small-size GUR-3 x-ray goniometer. A schematic diagram of the analyzing spectrometer is shown in Fig. 1 of the Enclosure. The test results were in agreement with earlier neutron-diffraction data by others, but did not agree with the data obtained by the x-ray method. A preliminary analysis of the obtained dispersion relations has made it possible to check on the force-interaction model for the atoms in the copper lattice, and has shown that when this model includes only the first and second coordination spheres it is unable to describe the obtained dispersion curves. "The authors thank N. M. Goman'kova for calculating the program for the constant-Q method, and V. I. Goman'kov, V. I. Ivlev, D. F. Litvin, A. A. Loshmanov, and B. G. Lyashchenko for help with the work." Orig. art. has 6 figures and 2 formulas.

ASSOCIATION: None

SUBMITTED: 27Jun64

ENCL: 01

SUB CODE: 88

NR REF SOV: 002

OTHER: 014

Card 2/3

L 34893-65
ACCESSION NR: AP5005269

ENCLOSURE: 01

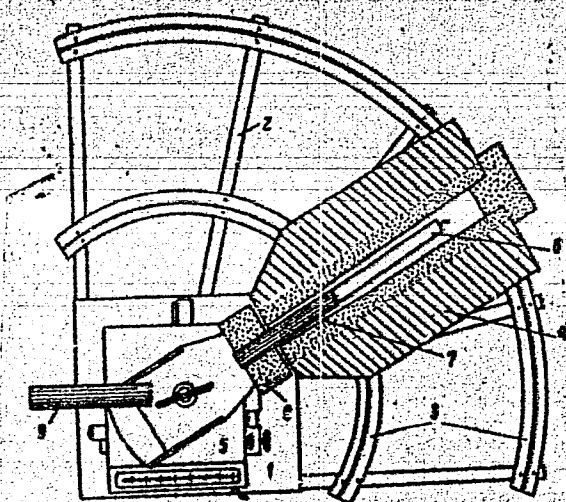


Fig. 1. Schematic diagram of analyzing spectrometer.

1 - Metal plate, 2 - channel beam, 3 - rounded rail track, 4 - counter, 5 - goniometer, 6 - frontal shield, 7 - collimator, 8 - end-window neutron counter, 9 - collimator

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L 2500-66 EWT(m)/I/EWP(t)/EWP(z)/EWP(b)/EWA(c) IJP(c) JD/HM

ACCESSION NR: AP5014615

UR/0181/65/007/006/1910/1912

AUTHORS: Vintaykin, Ye. Z.; Gorbachev, V. V.

TITLE: Phonon frequencies in the [100] direction of a nickel lattice

SOURCE: Fizika tverdogo tela, v. 7, no. 6, 1965, 1910-1912 ²⁷

TOPIC TAGS: phonon, nickel, neutron scattering, nuclear force, intermolecular force

ABSTRACT: The authors present results of experiments in which they have determined the frequencies of phonon in nickel, for wave vectors in the [100] direction. The experimental setup consisted of a monochromator and a positional spectrometer analyzer, consisting of the UNSA neutron-diffraction analysis apparatus. The monochromator and the analyzer were single-crystal lead plates with the (111) planes parallel to the surface. The wavelength of the incident neutrons was 1.44 Å. A detailed description of the experimental setup was published elsewhere (FTT v. 7, 363, 1965; PTE no. 3, 1965). The investigated nickel sample was a sphere 40 mm in diameter, cut from a single

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ACCESSION NR: AP5014615

3

crystal grown by the Czochralski method. A similar investigation with copper is described in the earlier paper. The results are compared with those obtained by x-ray diffraction and by neutron-diffraction methods, and attempts are made to reconcile the discrepancies between the various results. The interplanar force constants are calculated from the dispersion curves, which are found to be similar to sinusoidal curves, thus evidencing that the interaction extends only to the first coordination spheres. The character of the interatomic interaction is similar to that obtained in copper, but the force constants are larger. 'The authors thank V. P. Ovcharov for supplying the single-crystal nickel.' Orig. art. has: 1 figure and 1 table.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii, Moscow (Central Scientific Research Institute for Ferrous Metallurgy)

SUBMITTED: 06Feb65

ENCL: 00

SUB CODE: SS, NP

NR REF SOV: 004

OTHER: 002

PC
Card 2/2

L 6147-55 EWT(m)/EPF(n)-2/T/EWP(t)/EWP(b)/EWA(h)/EWA(c) Pu-4 IJP(c)
 ACCESSION NR: AP5020189 JD/DM UR/0089/65/018/005/0507/0507

AUTHOR: Vintaykin, Ya. Z.; Gorbachev, V. V.; Gruzin, P. L.

TITLE: Investigation of phonon spectra in copper lattice by means of inelastic neutron scattering

SOURCE: Atomnaya energiya, v. 18, no. 5, 1965, 507

TOPIC TAGS: phonon spectrum, copper, neutron scattering, crystal lattice, crystal

ABSTRACT: Descriptions are given of the method and equipment for determining phonon frequencies in copper monocrystals in the symmetry directions (100), (110), and (111), by means of inelastic neutron scattering. Orig. art. has: 1 table.

ASSOCIATION: none

SUBMITTED: 06Feb65

NR REF SOV: 002

ENCL: 00

OTHER: 003

SUB CODE: SS, NP

NA

Card 1/1

STEBLYANCO, P.I.; RESNICHENKO, Z.Y.; GERASHCHENKO, Ye.I.; SEMENOV, B.S.;
SNISARENKO, M.V.; KOBAROV, V.A.; SPICHKIN, I.M.; GORBACHEV, Ye.A.;
UVAROVA, A.F., tekhnicheskiy redaktor.

[Spare parts for the S-4 self-propelled combine; a reference catalog]
Zapaznye chasti samokhodnogo kombaina S-4; spravochnik-katalog.
Moskva, Gos.nauchno-tekhnicheskoe izd-vo mashinostroit.lit-ry, 1956.
179 p. (MLBA 9:5)

(Combines (Agricultural machinery))

AKHMATOV, Boris Aleksandrovich; ~~GORBACHEV, Ya. A.~~; IVANOV, I.S., inzhener;
DUBROVSKIY, V.A., redaktor; ~~PEVZNER, V.I.~~, tekhnicheskiiy redaktor

[Self-propelled combines] Samokhodnyi kombain. Pod red. I.S. Ivanova.
Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 183 p. (MLRA 9:8)
(Combines (Agricultural machinery))

ANASHKIN, A.T.; GORBACHEV, Ye.A.; RUMYANTSEV, Ye.K.; STROTS, V.I.;
SHUMAKOV, V.G.; PESTRYAKOV, A.I., red.; GOR'KOVA, Z.D.,
tekhn.red.

[Disassembling and assembling the SK-3 combine] Razborka i
sborka kombaina SK-3. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1961.
230 p. (MIRA 14:6)
(Combines (Agricultural machinery))

1 39771-65 ENT(d)/ENT(m)/EWP(w)/ENA(d)/EWP(r)/EWP(k)/ENA(h) Pf-4/Peb

ACCESSION NR: AT5006655 EM S/2549/64/000/193/0113/0122

AUTHOR: Gorbachev, Ye. B. (Candidate of technical sciences)

TITLE: An approximate design method for elastic-plastic shells of revolution

SOURCE: Moscow. Institut inzhenerov zheleznodorozhnogo transporta. Trudy, no. 193, 1964. Voprosy prikladnoy mekhaniki (Problems in applied mechanics), 113-122

TOPIC TAGS: shell of revolution, shell design, body of revolution, elastic plastic shell, axisymmetric load, successive approximation

ABSTRACT: The method of elastic solutions originally proposed by A. A. Il'yushin (Plastichnost', Gostekhizdat, 1948) is used to solve the system of nonlinear differential equations of an elastic-plastic shell, subjected to an axially symmetrical load. It is proposed to reduce the nonlinear system of differential equations to a linear system with variable coefficients. The linear system is then solved by dividing the shell into a number of zones in which the variable coefficients can be assumed constant, thus enabling one to use the method of successive approximations. The problem reduces to the case of an anisotropic elastic shell if the stress intensity σ_1 is assumed as $\sigma_1 = K(z, s)e_1$, where

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L 39771-65

ACCESSION NR: AT5006635

for the elastic case $E(z, \epsilon) = E$ (constant modulus of elasticity), and for the plastic case it is dependent upon the coordinates of the point, while ϵ_i is the deformation. Consequently, at each point in the plastic region, the shell material can be assumed to have different elastic properties. The solution requires the determination of four constants of integration for each zone from continuity relationships at the zone boundaries. The problem of a cylindrical tube loaded by radial lumped pressure is considered as an example. The computed critical load differs by only 20% from the exact value given by A. A. Il'yushin, when only 2 zones are considered. A larger number of zones will improve the accuracy of the solution but, in the author's opinion, a rough calculation should not require more than 2-3 zones. Orig. art. has: 20 formulas and 3 figures.

ASSOCIATION: Moskovskiy institut inzhenerov zheleznodorozhnogo transporta
(Moscow institute of railway transport engineers)

SUBMITTED: 00

ENCL: 00

SUB CODE: AS, ME

NO REF SQV: 007

OTHER: 000

Card 2/2

L 05657-67 EWP(k)/EWT(d)/EWT(m)/EWP(w)/EWP(v) IJP(c) EM/WW/JXT(CZ)

ACC NR: AT6025402

SOURCE CODE: UR/2649/66/000/225/0023/0027

AUTHOR: Gorbachev, Ye. B.

ORG: None*

TITLE: Elastoplastic deformations and stresses at the junction point between a cylindrical and a conical shell where the joint is reinforced by an elastic ring

SOURCE: *Moscow. Institut inzhenerov zheleznodorozhnogo transporta. Trudy, no. 225, 1966. Voprosy prikladnoy mekhaniki (Problems of applied mechanics), 23-27

TOPIC TAGS: shell theory, elastic stress, elastic deformation, plastic deformation, cylindric shell structure

ABSTRACT: The author generalizes the solution of the problem for the stressed and deformed state at the connection point between a cylindrical and conical shell beyond the limits of elasticity to the case of a joint reinforced by an elastic ring. The formulas given in the work are based on those derived in a previous paper by the author (Gorbachev, Ye. B. "Forces and Deformations Beyond the Limit of Elasticity at the Point of Connection Between a Cylindrical and a Conical Shell", Inzhenernyy zhurnal, No. 1, 1961). A system of algebraic equations is given for determining the transverse force and longitudinal bending moment in the n-th approximation. An example of application of the formulas is given based on a shell loaded by a given uniform

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U 05057-07

ACC NR: AT6025402

internal pressure assuming that the material of the shell has ideal plastic properties. The results show that considerable plastic deformations arise near the point of junction between the cylindrical and conical shells and that these deformations are propagated along the shells to a distance equal to 3 times the thickness. In addition to this plastic region, a second zone of plasticity is generated at a distance of the order of 12-15 times the thickness from the point of contact. The plastic deformations in this region are vanishingly small with respect to their effect on the deformed state at the point of connection. Deformations in the secondary zones of plasticity are distributed more evenly with respect to the height of the cross section. Orig. art. has: 3 figures, 1 table, 4 formulas.

SUB CODE: 20/ SUBM DATE: None/ ORIG REF: 002

ms
Card 2/2

Ye. GORBACHEV, ~~M.~~ M., Cand Med Sci -- (diss) ~~"On the~~
~~Toxicology of Certain Aliphatic Amines.~~ ^{ph} "On the
1958. 17 pp (Len ^{Sanitary} ~~San~~ Hygiene ^e ~~Inst~~ Med Inst), 200 copies
(KL 40-58, 115)

POZDNEV, A.; GORBACHEV, Yu.

Everyday life on the Yenisey River. Rech. transp. 22 no.4:
26-27 Ap '63. (MIRA 16:4)

1. Glavnyy inzhener remontnoy bazy flota na Yeniseye (for
Gorbachev).

(Yenisey River—Inland water transportations—
Employees)